

## Lecture Module - Electrical Instruments

ME3023 - Measurements in Mechanical Systems

Mechanical Engineering  
Tennessee Technological University

### Topic 1 - Performing Analog Measurements

## Topic 1 - Performing Analog Measurements

- Safety and Electricity
- Using a Digital Multimeter
- Measuring Voltage and Current
- Measuring Resistance and Continuity

# Safety and Electricity

Complete the safety training modules to learn more.

# Using a Digital Multimeter

## Benchtop Multimeter

- DMM
- Interface varies by manufacturer



Image: Fluke Multimeter



Image: Bk Precision Multimeter

# Using a Digital Multimeter

## Handheld Multimeter



Image:

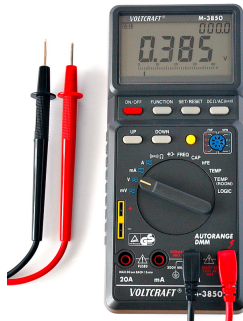


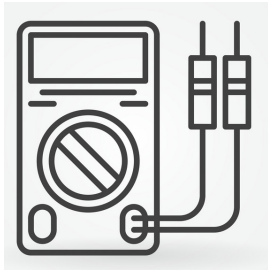
Image:



Image:

# Measuring Voltage and Current

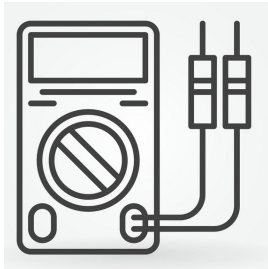
## Voltage



**Read about measuring DC voltage  
or AC voltage**

# Measuring Voltage and Current

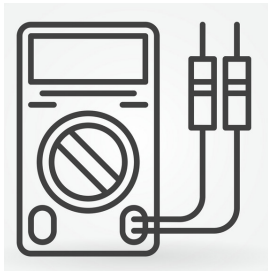
## Current



## Read about measuring current (with clamp)

# Measuring Resistance and Continuity

## Resistance

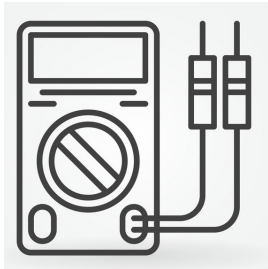


[Read about measuring resistance.](#)



# Measuring Resistance and Continuity

## Continuity



[Read about measuring continuity](#)